

REMARKS

Claims 1-34 are pending in the application. All claims remain unamended. Claims 9 and 25 were rejected under 35 U.S.C. 112 as being incomplete for omitting essential structural cooperative relationships of elements. Claims 1-8 and 10-15 were rejected under 35 U.S.C. 102(b) in view of Vodzak '775. Claims 16-34 were rejected under 35 U.S.C. 103(a) in view of Vodzak '775 over Chenausky '663. The drawings were objected to as failing to comply with 37 CFR 1.83(a), 1.84(p)(4) and 1.84 (p)(5).

1. **Changes to the Drawing and the Specification.**

Amendments to the drawings are made on a separate cover to remove reference numbers 107 and 209 in Figure 1; to remove reference numbers 308 and 309 in Figure 2, to replace one of the redundant reference number 408 to 401 in Figure 3; and to correct lead line of reference number 421 to the clip feature in Figure 4. It is submitted that the proposed drawing corrections make the drawings conform to the requirements of 37 CFR 1.83(a), 1.84(p)(4) and 1.84(p)(5).

The table on pages 2-3 has been amended to include serial numbers of applications related to the instant application as referenced therein. The specification at pages 10, 11 and 13 have been amended to properly correspond reference numbers according to the drawing changes as described above and to correct misnumbered reference numbers.

It is submitted that these amendments to the drawing and specification are supported by the application as originally filed and adds no new matter.

2. Section 112 Rejection.

Claim 9 recites,

A device according to claim 1, wherein the optical element is **selected from the group consisting of** a fully reflective mirror, a partially transparent, partially reflective mirror, and a fully transparent window.

and claim 25 recites,

A gas laser according to claim 16, wherein the optical element is **selected from the group consisting of** a fully reflective mirror, a partially transparent, partially reflective mirror, and a fully transparent window.

It is submitted that claims 9 and 25 include a proper form of a Markush group. An acceptable form of alternative expression recites members as being “selected from the group consisting of A, B and C.” MPEP §2173.05(h). Here, the Markush group consists of A) a fully reflective mirror, B) a partially transparent, partially reflective mirror, and C) a fully transparent window. Therefore, Applicants respectfully traverse the rejection under Section 112, second paragraph.

3. Section 102 Rejection.

Claim 1 includes the limitation,

an optical element holder comprising a tubular gripping portion and a tubular extraction portion connected at one end to the tubular gripping portion and having a diameter less than the tubular gripping portion, the **tubular gripping portion** gripping the **peripheral edge** of the optical element.

The tubular gripping portion gripping the peripheral edge of the optical element facilitates safely detaching the holder and the optical element from, for example, a mounting structure and improves maintainability of the optical element.

In contrast, Vodzak '775 is directed to a probe for an electronic thermometer that includes a seal assembly for preventing debris and other contaminants from entering the probe tip. Each embodiment described by Vodzak '775 includes an IR filter held in place by compressive force in a direction perpendicular to the plane of the filter. Figures 13, 14 and 15 illustrate a probe embodiment wherein a filter holder assembly 536 includes a holding member 537, a seal 535, a filter 515 and a screw-on member 538. See, col. 9, lines 23-26 and Figure 15. To assemble the holder assembly 536, the seal 535 and the filter 515 are placed on the inner flange 540 of the holding member 537 and the screw-on member 538 is screwed onto the holding member to secure the filter 515 in place. See, col. 9, lines 40-50. To assemble the thermometer, the filter holder assembly 536 is connected to tube 513 until it abuts an o-ring 528 located on the thermometer body 510. Other thermometer components are then attached to the tube 513 such that the tube 513 and the filter holder assembly 536 are secured to the body 510. See, col. 9, line 51- col.10, line 19 and Figures 13, 14 and 15. The removable probe tip 511 is then screwed onto the body 510.

Vodzak '775 does not describe an optical element holder including a tubular gripping portion gripping the peripheral edge of the optical element. Examiner's element numbers 2 and 3, referred to as an optical element holder comprising a tubular gripping portion in the Office Action, are not described in Vodzak '775 for gripping the peripheral edge of, in this case, the filter 515. Examiner's element numbers 2 and 3 correspond to threaded portion 542 and inner flange 540 of holding member 537. See, Figure 15. However, it is not clear from the drawings what the structural relationship is between the flange 540 and the filter 515. Vodzak '775 makes no indication that the flange grips the peripheral edge of the filter. In the specification, Vodzak '775 describes the "holding member 537 further includes an inner flange 540 located on the inside surface of member 537 for seating the IR filter 515 so that the filter 515 and the filter sealing member 535 are

approximately flush to the distal end of member 537.... Once the filter sealing member 535 and the IR filter 515 are properly seated inside the holding member 537, the screw-on member 538 ... is screwed onto the threaded portion 542 of the holding member 537 and the filter holder assembly 536 is completed.” See, col. 9, lines 36-50. Thus, the filter 515 is placed in the inner flange 540 and the screw-on member 538 is installed to hold the filter in place by compressive force in a direction perpendicular to the face of the filter. Sizing the inner flange 540 to be **approximately flush** with the filter fails to indicate whether the inner flange even contacts the perimeter of the filter much less provide for gripping the peripheral edge of the filter. Therefore, without the screw-on member 538, the filter 515 is free to fall out of the holding member 537.

To anticipate a claim, a reference must teach every element of the claim. MPEP §2131.01. As Vodzak ‘775 fails to teach an optical element holder comprising a tubular gripping portion and a tubular extraction portion connected at one end to the tubular gripping portion and having a diameter less than the tubular gripping portion, the tubular gripping portion gripping the peripheral edge of the optical element, the rejection under Section 102 cannot be sustained. It is further submitted that claim 1 is non-obvious over Vodzak ‘775 above or in combination with any other item of record. Because the optical element is held in the optical element holder, the optical element may readily and safely be detached from, for example, a gas laser. Therefore, the device of claim 1 advantageously minimizes potential of damaging the optical element or the gas laser during maintenance and installation. Further, by gripping the peripheral edge of the optical element, the optical element holding and extraction device facilitates rotating the optical element to any angle and achieving the rotation without first emptying the laser gas. None of the items of record disclose or suggest such a combination. Thus, it is submitted that claim 1 is allowable.

Claims 2-15, depending upon claim 1, should also be allowable in part as depending upon an allowable base claim. Further, claim 12 includes the limitation wherein the gripping portion comprises an annular clip in which the optical element is received and a stop provided on the inner surface of the annular clip, said stop holding the optical element in the annular clip. The stop may help lock the optical element in the annular clip and aid in preventing the optical element from falling out of the gripping portion when the optical element holding and extraction device is detached, for example, from a gas laser.

Further, claim 14 includes the limitation, wherein the mounting structure comprises a flexible tube element comprising a base end, an optical element receiving end, an optical element receiving surface within the flexible tube element proximate to the receiving end, and a flexible section interposed between the base end and the receiving surface. Such a device helps to facilitate angularly adjusting the optical element.

4. Section 103 Rejection.

Claim 16 includes the limitation,

an optical element holder comprising a tubular gripping portion and a tubular extraction portion connected at one end to the tubular gripping portion and having a diameter less than the tubular gripping portion, the **tubular gripping portion** gripping the **peripheral edge** of the optical element

As described above, Vodzak '775 fails to disclose an optical element holder including a tubular gripping portion gripping the peripheral edge of the optical element. Chenausky '663 also does not disclose this limitation.

A *prima facie* case of obviousness requires that "the prior art reference (or references when combined) must teach or suggest all the claim limitations." MPEP §2142. Here, neither Vodzak

'775 nor Chenausky '663 discloses "an optical element holder comprising a tubular gripping portion and a tubular extraction portion connected at one end to the tubular gripping portion and having a diameter less than the tubular gripping portion, the tubular gripping portion gripping the peripheral edge of the optical element." Thus, the combination of Vodzak '775 and Chenausky '663 fails to teach or suggest every element of claim 16. It is submitted claim 16 is non-obvious and allowable.

Claims 17-34, depending upon claim 16, should also be allowable in part as depending upon an allowable base claim. Further, claim 28 includes the limitation, wherein the gripping portion comprises an annular clip in which the optical element is received and a stop provided on the inner surface of the annular clip, said stop holding the optical element in the annular clip. The stop may help lock the optical element in the annular clip and aid in preventing the optical element from falling out of the gripping portion when the optical element holding and extraction device is detached, for example, from a gas laser.

Further, claim 30 includes the limitation wherein the mounting structure comprises a flexible tube element comprising a base end, an optical element receiving end, an optical element receiving surface within the flexible tube element proximate to the receiving end, and a flexible section interposed between the base end and the receiving surface. Such a device helps to facilitate angularly adjusting the optical element.



Patent
Attorney Docket: 250/002

5. Conclusion

Therefore, it is respectfully submitted that claim 1-34 are allowable and a Notice of Allowance is earnestly solicited.

Respectfully submitted,

LYON & LYON LLP

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By: 

Charles C. Wong
Reg. No. 50,423

633 West Fifth Street, Suite 4700
Los Angeles, California 90071-2066
(213) 489-1600

Version with Markings to Show Changes Made

The table on pages 3 and 4 of the specification:

Docket No.	Title	Inventors	Filing Date	Serial or Patent No.
249/300	Gas Laser Discharge Unit	Claus Strowitzki and Hans Kodeda	February 22, 2000	<u>09/510,539</u>
249/301	A Gas Laser and a Dedusting Unit Thereof	Hans Kodeda, Helmut Frowein, Claus Strowitzki, and Alexander Hohla	February 22, 2000	<u>09/511,649</u>
249/302	Dedusting Unit for a Laser Optical Element of a Gas Laser and Method for Assembling	Claus Strowitzki	February 22, 2000	<u>09/510,667</u>
249/303	Shadow Device for A Gas Laser	Claus Strowitzki and Hans Kodeda	February 22, 2000	<u>09/510,017</u>
249/304	Modular Gas Laser Discharge Unit	Claus Strowitzki and Hans Kodeda	February 22, 2000	<u>09/510,538</u>
250/001	Adjustable Mounting Unit for an Optical Element of a Gas Laser	Hans Kodeda, Helmut Frowein, Claus Strowitzki, and Alexander Hohla	February 22, 2000	<u>09/511,648</u>

On page 10, lines 22 – 36:

The adjustable mounting devices 300 according to the present invention preferably comprise a stud bolt 403, a biasing element 402, such as a coil spring, and an adjusting nut 305. As illustrated in FIG. 4, each stud bolt 403 preferably comprises two threaded ends and a body portion interposed between the two threaded portions. Preferably, as illustrated, the body portion is larger in diameter than the two threaded ends. The first threaded end 404 of stud bolt 403 is slideably received through

a hole in the rigid support structure 117 so that the first threaded end extends through the support structure. The second threaded end is used to attach the support structure 117 to the end wall 96 of laser tube 101 (or end wall 98 in the case of adjustable mounting unit 120). Coil spring 402 may be slideably carried on the body portion of stud bolt 403, and adjusting nut [405] 305 is threaded onto the first threaded end 404 of the stud bolt 403 extending through the rigid support structure. As a result, the support structure 117 is slideably interposed between the adjusting nut [405] 305 and a first end of the coil spring. When the threaded end of the stud bolt is attached to the laser tube, spring 402 biases the support structure 117 away from the second threaded end of the stud bolt 403 toward the adjusting nut 305.

On page 11, lines 1 – 4:

Preferably stud bolt 403 further comprises a spring stop [408] 401 disposed on the body portion of the stud bolt proximate to the second threaded end. The second end of coil spring 402 then abuts the spring stop [408] 401 so that the coil spring is interposed between the spring stop and the rigid support structure 117.

On page 13, lines 5 – 16:

As can be seen from FIGs. 3 and 4, the gripping portion 418 is in a gripping arrangement around the peripheral edge of optical element 116. To achieve this gripping arrangement, the gripping portion 418 preferably comprises an annular clip 421 in which the optical element is received and a stop 413. Stop 413 is provided on the inner diameter of the annular clip 421 and abuts the laser side of optical element [416] 116 to help lock the optical element in the annular clip

421 of the gripping portion 418. Stop 413 may comprise, for example, a snap ring or other locking mechanism such as a detent. Thus, with the aid of stop 413, the optical element 116 is prevented from falling out of the gripping portion 418 when the optical element holding and extraction device 408 is detached from the adjustable mounting structure 103 or 120. This is true even though O-ring seal 412 tends to stick to the mating face of the optical element 116 and thus tends to pull the optical element toward the laser tube 101.